Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A prophylactic or therapeutic method for a disease associated with decreased expression of AOP-1 gene or AOP-1, comprising ~~(1) transfecting a nucleic acid encoding AOP-1 or a nucleic acid encoding a polypeptide having an addition, deletion or substitution of one or more amino acids as compared with the amino acid sequence of AOP-1 while retaining the function of AOP-1, or (2) administering a material enhancing the expression of AOP-1 gene, a material enhancing the production of AOP-1 or a material enhancing the function of AOP-1~~
administering by direct injection or catheter-based delivery an expression vector comprising a nucleic acid to cells of an individual, wherein said nucleic acid enhances the production of AOP-1 and is:

(1) a nucleic acid encoding AOP-1; or

(2) a nucleic acid that hybridizes under stringent conditions to a complementary strand of a nucleic acid encoding AOP-1 and encodes a polypeptide that retains the function of AOP-1.

Claims 2-6 (Cancelled)

7. (Original) The prophylactic or therapeutic method of claim 1, wherein the disease associated with decreased expression of AOP-1 gene or AOP-1 comprises chronic heart failure, ischemic heart failure, ischemic heart disease, rheumatoid arthritis, neurodegenerative disease, hepatic disease or renal failure.

8. (Currently Amended) A prophylactic or therapeutic agent for a disease associated with decreased expression of AOP-1 gene or AOP-1, comprising as an active ingredient: ~~(1) a nucleic acid encoding AOP-1 or a nucleic acid encoding a polypeptide having an addition, deletion or substitution of one or more amino acids as compared with the amino acid sequence of AOP-1 while retaining the function of AOP-1, or (2) a material enhancing the expression of AOP-1 gene, a material enhancing the production of AOP-1 or a material enhancing the function of~~

~~AOP-1~~

a nucleic acid that enhances the production of AOP-1, wherein said nucleic acid is:

(1) a nucleic acid encoding AOP-1; or

(2) a nucleic acid that hybridizes under stringent conditions to a complementary strand of a nucleic acid encoding AOP-1 and encodes a polypeptide that retains the function of AOP-1.

Claims 9-13 (Cancelled)

14. (Original) The prophylactic or therapeutic agent of claim 8, wherein the disease associated with decreased expression of AOP-1 gene or AOP-1 comprises chronic heart failure, ischemic heart failure, ischemic heart disease, rheumatoid arthritis, neurodegenerative disease, hepatic disease or renal failure.

15. (Withdrawn) A diagnostic method for a disease associated with decreased expression of AOP-1 gene or AOP-1, comprising determining the expression level of AOP-1 gene or the production level of AOP-1 to make a diagnosis based on the expression level or production level.

16. (Withdrawn) The diagnostic method of claim 15, wherein the disease associated with decreased expression of AOP-1 gene or AOP-1 comprises chronic heart failure, ischemic heart failure, ischemic heart disease, rheumatoid arthritis, neurodegenerative disease, hepatic disease or renal failure.

17. (Withdrawn) A diagnostic agent or diagnostic kit for a disease associated with decreased expression of AOP-1 gene or AOP-1, comprising a means for determining the expression level of AOP-1 gene or the production level of AOP-1 as a measure.

18. (Withdrawn) The diagnostic agent or diagnostic kit of claim 17, wherein the disease associated with decreased expression of AOP-1 gene or AOP-1 comprises chronic heart failure, ischemic heart failure, ischemic heart disease, rheumatoid arthritis, neurodegenerative disease, hepatic disease or renal failure.

19. (Withdrawn) A non-human transgenic animal suitable for use as a pathologic model of a disease associated with decreased expression of AOP-1 gene or AOP-1 wherein the production of AOP-1 is suppressed or the expression of AOP-1 gene is suppressed or AOP-1 gene is deleted.

20. (Withdrawn) The non-human transgenic animal of claim 19, wherein the disease associated with decreased expression of AOP-1 gene or AOP-1 comprises chronic heart failure, ischemic heart failure, ischemic heart disease, rheumatoid arthritis, neurodegenerative disease, hepatic disease or renal failure.

21. (Withdrawn) A transformed tissue or transformed cell suitable for use as a tissue model or a cell model of a disease associated with decreased expression of AOP-1 gene or AOP-1 wherein the production of AOP-1 is suppressed or the expression of AOP-1 gene is suppressed or AOP-1 gene is deleted.

22. (Withdrawn) The transformed tissue or transformed cell of claim 21, wherein the disease associated with decreased expression of AOP-1 gene or AOP-1 comprises chronic heart failure, ischemic heart failure, ischemic heart disease, rheumatoid arthritis, neurodegenerative disease, hepatic disease or renal failure.

23. (Withdrawn) A method for screening a material enhancing the expression of AOP-1 gene, a material enhancing the production of AOP-1, a material enhancing the function of AOP-1, or a combination thereof, comprising administering or adding a synthesized or genetically engineered material or a natural material or a derivative thereof to the non-human transgenic animal or transformed tissue or transformed cell of claim 18 to detect the expression level of AOP-1 gene or the production level of AOP-1.

24. (Withdrawn) A method for screening a material enhancing the expression of AOP-1 gene, a material enhancing the production of AOP-1, a material enhancing the function of AOP-1, or a combination thereof, comprising contacting a synthesized or genetically engineered

material or a natural material or a derivative thereof with (1) a transformed cell or an in vitro expression system having a transcriptional regulatory region of AOP-1 gene and AOP-1 gene or a reporter gene to detect the expression level of AOP-1 gene or the reporter gene or with (2) AOP-1 or a target molecule of AOP-1 to detect the amount of AOP-1 or the target molecule of AOP-1.

25. (Withdrawn) The screening method of claim 24, further comprising constructing an expression vector having a transcriptional regulatory region of AOP-1 gene linked upstream or downstream of the translation region of a reporter gene, then culturing a suitable host cell transfected with said vector, adding a synthesized or genetically engineered material or a natural material or a derivative thereof to the cultured cell and detecting changes in the expression level of the reporter gene or the production level of the reporter protein after a given period.

26. (Withdrawn) The screening method of claim 24, further comprising contacting a synthesized or genetically engineered material or a natural material or a derivative thereof with AOP-1 or a target molecule of AOP-1 to detect the amount of AOP-1 or the target molecule of AOP-1 bound or unbound to said material.

27. (Withdrawn) The screening method of claim 24, further comprising immobilizing AOP-1 or a target molecule of AOP-1 on a substrate and adding a synthesized or genetically engineered material or a natural material or a derivative thereof and AOP-1 or target molecule of AOP-1 to the immobilized AOP-1 or target molecule of AOP-1 to detect the amount of AOP-1 or the target molecule of AOP-1 bound or unbound.

28. (Withdrawn) The screening method of claim 24, further comprising immobilizing a synthesized or genetically engineered material or a natural material or a derivative thereof on a substrate and adding AOP-1 or a target molecule of AOP-1 to the immobilized material to detect the amount of AOP-1 or the target molecule of AOP-1 bound or unbound.

29. (Withdrawn) A method for screening a material enhancing the function of AOP-1, comprising contacting a synthesized or genetically engineered material or a natural material or a

derivative thereof with AOP-1 or a target molecule of AOP-1 to determine the antioxidant or peroxynitrite scavenging activity of AOP-1.

30. (Withdrawn) The screening method of claim 29, further comprising adding a synthesized or genetically engineered material or a natural material or a derivative thereof and AOP-1 or a target molecule of AOP-1 to AOP-1 or the target molecule of AOP-1 to determine the antioxidant or peroxynitrite scavenging activity of AOP-1.

31. (Withdrawn) The screening method of claim 29, further comprising immobilizing AOP-1 or a target molecule of AOP-1 on a substrate and adding a synthesized or genetically engineered material or a natural material or a derivative thereof and AOP-1 or the target molecule of AOP-1 to the immobilized AOP-1 or target molecule of AOP-1 to determine the antioxidant or peroxynitrite scavenging activity of AOP-1.

32. (Withdrawn) The screening method of claim 29, further comprising immobilizing a synthesized or genetically engineered material or a natural material or a derivative thereof on a substrate and adding AOP-1 or a target molecule of AOP-1 to the immobilized material to determine the antioxidant or peroxynitrite scavenging activity of AOP-1.

33. (New) The method of claim 1, wherein said nucleic acid is SEQ ID NO 1.

34. (New) The method of claim 1, wherein said nucleic acid is SEQ ID NO 2.

35. (New) The method of claim 1, wherein said nucleic acid is SEQ ID NO 3.

36. (New) The method of claim 8, wherein said nucleic acid is SEQ ID NO 1.

37. (New) The method of claim 8, wherein said nucleic acid is SEQ ID NO 2.

38. (New) The method of claim 8, wherein said nucleic acid is SEQ ID NO 3.